

a fragile component contained in the tank,
positioned within the footprint of the opening and configured to
transmit sonic energy; and

93 a barrier that extends above at least the width of
the fragile component and is positioned so as to protect a
central region of the length of the fragile component.

AMENDED 13. An apparatus configured to clean a
semiconductor substrate, comprising:

a tank configured to contain a liquid, the tank having an
opening configured to allow a substrate to enter the tank from a
position above the tank;

a fragile component contained in the tank, positioned within
the footprint of the opening, and configured to transmit sonic
energy; and

94 a barrier that extends above at least the width the fragile
component;

wherein:

the fragile component comprises a quartz plate; and

the barrier comprises a substrate support, the
substrate support comprises an extended roller, and the extended
roller comprises a hollow extension.

AMENDED 17. An apparatus configured to clean a
semiconductor substrate, comprising:

95 a tank configured to contain a liquid, the tank having an
opening configured to allow a substrate to enter the tank from a
position above the tank;

a fragile component contained in the tank, positioned within
the footprint of the opening, and configured to transmit sonic
energy; and

a barrier that extends above at least the width the fragile
component;

95 wherein the barrier is configured so as to be transparent to the sonic energy transmitted by the fragile component.

AMENDED 20. An apparatus configured to clean a semiconductor substrate, comprising:

a tank configured to contain a liquid, the tank having an opening configured to allow a substrate to enter the tank from a position above the tank;

a fragile component contained in the tank, positioned within the footprint of the opening, and configured to transmit sonic energy; and

96 a barrier extending above at least the width the fragile component;

wherein the barrier has a thickness that is a multiple of one half of the wavelength of the sonic energy transmitted by the fragile component as the sonic energy travels through the barrier material.

Please add new claims 22-30 as follows:

NEW 22. The apparatus of claim 9 wherein the barrier comprises at least three substrate support rollers.

97 **NEW** A 23. The apparatus of claim 22 wherein the barrier is configured so as to be transparent to the sonic energy transmitted by the fragile component.

NEW A 24. The apparatus of claim 22 wherein the barrier has a thickness that is a multiple of one half of the wavelength of the sonic energy transmitted by the fragile component as the sonic energy travels through the barrier material.

NEW K 25. The apparatus of claim 11 wherein the extended roller is a bottom roller positioned so as to contact a bottom region of a substrate supported thereby.

NEW A 26. The apparatus of claim 25 wherein the barrier is configured so as to be transparent to the sonic energy transmitted by the fragile component.

NEW A 27. The apparatus of claim 25 wherein the barrier has a thickness that is a multiple of one half of the wavelength of the sonic energy transmitted by the fragile component as the sonic energy travels through the barrier material.

NEW 28. An apparatus configured to clean a semiconductor substrate, comprising:

a tank configured to contain a liquid, the tank having an opening configured to allow a substrate to enter the tank from a position above the tank;

97 a fragile component contained in the tank, positioned within the footprint of the opening, and configured to transmit sonic energy; and

a barrier that extends above at least the width of the fragile component;

wherein:

the barrier comprises a substrate support, the substrate support comprises an extended roller, and the extended roller is a bottom roller positioned so as to contact a bottom region of a substrate supported thereby.

NEW 29. The apparatus of claim 28 wherein the barrier is configured so as to be transparent to the sonic energy transmitted by the fragile component.